

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A nozzle for producing a flat spray pattern, the nozzle comprising a fluid passageway terminating in an end wall having an outlet aperture, the fluid passageway having at least one deflector that deflects the fluid towards the aperture; and adjustable means to vary the cross section of the aperture.
- 10 2. The nozzle according to claim 1, wherein the fluid passageway has two deflectors in the form of wall portions that converge towards the aperture.
- 15 3. The nozzle according to either claim 1 or claim 2, wherein the means to vary the cross section of the aperture comprises displaceable shutters that move from opposite sides of the aperture to decrease or increase the cross section of the aperture.
- 20 4. The nozzle according to any one of the preceding claims, wherein the end wall is furnished by a cross member that extends across the end of the fluid passageway, the cross member supporting axially displaceable pins adapted to move across the aperture to decrease or increase the cross section of the aperture.
- 25 5. The nozzle according to claim 4, wherein means is provided to control the axial displacement of the pins.
- 30 6. The nozzle according to claims 4 or 5, wherein in adjusting the cross section of the aperture the pins move the same distance in opposing directions.
- 35 7. The nozzle according to any one of claims 4 to 6, wherein the fluid passageway and cross member are circular.

8. The nozzle according to claim 7, wherein the diameter of the fluid passageway is the same as the diameter of the cross member.

5 9. The nozzle according to any one of claims 1 to 8, wherein each pin is coupled to an internally threaded block, a shaft being in threaded engagement with each block whereby rotation of the shaft causes movement of the blocks to displace the pins in opposite axial directions.

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10. A nozzle for producing a flat spray pattern, the nozzle comprising a T-piece, the leg of which is a pipe defining a fluid passageway and the head of the T being a pipe positioned across the end of the fluid passageway, an aperture is positioned in the head of the T-piece axially aligned with the fluid passageway, the head pipe defining two deflectors that converge towards the aperture, and a pin terminating in a planar end face is positioned at each end of the head of the T-piece to be displaceable along the T-piece so that the end faces of the pin can move across the aperture to vary the cross section of the aperture.

11. The nozzle according to claim 10, wherein the pins are in screw threaded engagement with the head of the T-piece so that axial displacement of the pins across the aperture is effected by rotation of the pins.

12. Snowmaking equipment comprising at least one nozzle according to any one of the preceding claims, the nozzle being inclined upwardly to, in use, project a plume of water droplets, the nozzle being positioned adjacent a jet of compressed air, the variation in the cross section of the aperture reflecting the characteristics of the plume.

30 35 13. Snowmaking equipment comprising at least one flat

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jet water nozzle inclined upwardly to, in use, project a plume of water droplets, the nozzle being positioned adjacent a jet of compressed air, the nozzle having an outlet aperture, and means to vary the cross section of 5 the aperture to adjust the characteristics of the plume to suit the ambient conditions.

14. The snowmaking equipment according to either 10 claim 12 or 13, wherein the jet of compressed air is placed downstream of the nozzle.

15. The snowmaking equipment according to claim 14, wherein the jet of compressed air comprises an array of 15 apertures.

16. The snowmaking equipment according to claim 15, wherein the width of the jet equates to the width of the plume of the water droplets.

20 17. The snowmaking equipment according to any one of claims 12 to 16, wherein the plume of water droplets escaping from the nozzle is directed tangentially against the underside of the air jet.

25 18. The snowmaking equipment according to any one of claims 12 to 17, wherein four flat jet water nozzles are positioned spaced apart in a horizontal plane, the spacing of the nozzles equating to the maximum width of each plume.

30 19. The snowmaking equipment according to any one of claims 12 to 18 wherein the water nozzle, nozzles and jet or jets of compressed air are supported on a head, the head being pivotally inclined to a self standing mast.

35 20. The snowmaking equipment according to claim 19 wherein the mast is rotatable about a vertical axis.

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21. The snowmaking equipment according to either
claim 19 or 20, wherein the head is vertically adjustable
relative to the mast whilst maintain the angle of
5 inclination of the water nozzle and air jet.

22. The snowmaking equipment according to any one of
claims 19 to 21, wherein the head includes four nozzles
spaced so that the plumes meet at their widest points.

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23. A nozzle substantially as described herein with
reference to and as illustrated in the accompanying
drawings.

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24. Snowmaking equipment substantially as described
herein with reference to and as illustrated in the
accompanying drawings.

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